



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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POLREP #10

Vermiculite Intermountain Site
Salt Lake City, Utah

I. HEADING

Date: September 29, 2004
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POLREP No: POLREP #10
Site: Vermiculite Intermountain Site
333 West 100 South (former)
Salt Lake City, Utah

II. BACKGROUND

Site Number:	08-GA
Party Conducting the Action:	EPA & PRP
Response Authority:	CERCLA
NPL Status:	No
Action Memorandum Status:	Approved - April 7, 2004
Fund-Lead Removal Action:	
Date Action Started:	April 14, 2004
Completion Date:	TBD
PRP-Lead Removal Action:	
AOC Issued:	April 9, 2004
PRP Action Start	April 9, 2004
PRP Completion	TBD

III. SITE INFORMATION

A. Incident Category

Time Critical Removal Action

B. Site Description

1. Site description

Vermiculite Intermountain ('VI'), located on the west edge of downtown Salt Lake City, UT, is one of many facilities that received vermiculite ore from a mine near Libby, Montana. The Libby mine, at one time, produced about 80% of the world's supply of vermiculite ore. From Libby, some of the ore was shipped to various locations throughout

the United States for further processing and distribution. Vermiculite ore from the Libby mine is co-mingled with amphibole asbestos of the tremolite-actinolite-richterite-winchite solution series ('tremolite asbestos'), and varying amounts of tremolite asbestos remain at many of the facilities which managed and/or processed ore from the Libby mine.

The VI facility received vermiculite ore in rail cars from 1940 until the early 1980s. In the mid 1980s, the facility was sold and the processing plant was relocated to another site several blocks away. At the VI facility, the ore was heated in a dry furnace until the imbedded layers of asbestos expanded ('exfoliated') (the process resembles that which happens to popcorn when it is heated). The exfoliated vermiculite (also known as "Zonolite") was then released to wholesale and retail markets for a variety of uses including home and building insulation and as a soil amendment. The original VI boundaries have changed over time - portions of the former site now consist of a Utah Power & Light (UPL) substation, a commercial parking lot, and small businesses. The surrounding neighborhood is primarily commercial and recreational.

2. Site evaluation and characteristics

The VI property and the surrounding area have undergone extensive urban redevelopment in the last 2-3 decades, and the original VI property boundaries are now indistinct. A former employee, however, stated that the majority of the VI exfoliation building was on the parcel now used by UPL (a PacifiCorp subsidiary) as an electrical substation. Some gravel fill has been placed in and around the substation hardware and across the adjacent parking/service areas. The substation is secured at all times by chain-link fencing and locked gates. Properties adjacent to the substation are currently used for a variety of municipal and/or commercial purposes.

During substation walkthrough inspections in 2002, what appeared to be vermiculite could be seen on the ground surface in several locations. EPA subsequently sampled portions of the substation property in October 2002. As geoprobe core samples were obtained, what appeared to be visible vermiculite/asbestos waste material (a.k.a., "stoner rock") could be seen in the cores. Analysis of surface and subsurface soils indicated percent-levels of tremolite asbestos in some surface locations and at some subsurface horizons.

Following EPA notification of the analytical findings, UPL, through a local asbestos firm in December 2002, removed loose vermiculite from the scarified ground surface using a high-efficiency vacuum in order to address immediate exposure concerns for their employees. Efficacy samples following that mitigation effort have not been collected.

Percent levels of tremolite asbestos remain in the subsurface at the UPL substation, and trace to percent levels are also present on the ground surface within the substation.

Additional Libby Amphibole (LA)-focused samples were collected at various locations within the (downtown) Salt Lake City one-square-block area (bordered by 100 South, 400 West, 200 South, and 300 West Streets) surrounding the old "VI" location.

Utah Paper Box Company

Ambient air samples, personal air samples, and dust samples were taken throughout the facility, and no LA contamination was found.

Artistic Printing

Ambient air samples, personal air samples, and dust samples were collected throughout the facility, with LA being detected in all dust and one ambient air sample. Following detailed discussions about activity timing and sequencing, the facility owner was able to identify an "economic window of opportunity" for the TCRA. Accordingly, EPA initiated the Removal on April 14, 2004.

Frank Edwards Building (owned by La Quinta Corporation)

Dust samples collected inside the vacant building showed LA contamination in two of three rooms. Mobilization for cleanup inside the building is expected in late-May.

AMPCO Parking Lot (owned by La Quinta Corporation)

Core samples show trace amounts of LA at a depth of 32" to 38" below the surface of the parking lot. Additional sub-surface samples are being collected across the parking lot in order to further define the extent of contamination. Scheduling of the TCRA for cleanup of the parking lot is pending.

3. Description of threat

Asbestos is a hazardous substance as defined by the NCP (40 CFR Section 302.4). Tremolite asbestos is of concern because chronic inhalation of excessive concentrations of the fibers can possibly result in lung diseases such as asbestosis, mesothelioma, and cancer. Sub acute exposures as short as a few days may cause mesothelioma.

4. State and Local Role

EPA has consulted with the Utah Department of Environmental Quality (UDEQ) concerning the sampling events and results. Neither UDEQ nor local agencies have the resources to conduct the needed site investigations or clean-ups independently.

IV. RESPONSE INFORMATION

A. Removal Actions - Fund-Lead

1. Libby Amphibole (LA) mitigation inside Artistic Printing is complete.

All miscellaneous equipment and machines were cleaned and checked, with microvac samples collected at various, random locations. When analytical results showed non-detect for LA, the equipment was covered, with the shrouds sealed to the floor with duct tape. Structural portions of the 'press' room, the 'bindery' room, and the office area were then cleaned, cleared, and encapsulated. Initial clearance sampling in the press room showed 1 LA structure on the sample cartridge. Accordingly, the press room was re-cleaned, re-encapsulated, and re-cleared, with the new analytical results showing non-detect for LA. Following final clearance, crews commenced transferring stock, miscellaneous supplies, and other Artistic Printing items from storage trailers back into the cleaned building. Artistic Printing resumed limited production on June 2.

2. Libby Amphibole (LA) mitigation inside the Frank Edwards Building (FEB) is complete.

Containment/isolation barriers were erected around interior office spaces. Old carpeting, drop ceiling panels, and non-essential wiring were stripped from the isolated spaces and removed for off-site disposal. Old ceiling insulation was removed from a portion of the FEB to off-site disposal. The building interior was cleaned by combinations of low-pressure water flushing and rinse, wet and dry wiping, and vacuuming. Cleaning was followed by liberal use of encapsulant. After a single LA structure was detected in clearance samples collected in one of the smaller isolation areas, the area was re-vacuumed and encapsulant re-applied. A subsequent clearance sample showed ND for LA. Response crews then installed replacement drop ceiling panels in the interior offices and replacement ceiling insulation bats in a portion of the FEB, and restored the HVAC system to a operational state. A final building walk-through with a representative of the building's owner was held on July 13, 2004, and the ERRS completed demob on July 16, 2004.

B. Removal Actions - PRP-Lead

3rd Street (Electrical) Substation:

PRP conducted a pre-bid conference re: cleanup of the 2-story switch house on July 14, and received bids for cleanup of the parcel surface and near-surface areas on July 30. PRP cleanup of the switch began August 9, 2004 and took about ten days to complete. **Primary mobilization for cleanup of the balance of the substation began on August 23. Excavation of contaminated portions of the site with removal of asbestos-contaminated materials to an off-site disposal facility is continuing. Work site and perimeter air monitoring is being performed by PRP and EPA crews. Clearance sampling is being performed by EPA crews.**

C. Future Plans

Ampco Parking Lot:

State will continue negotiations with the property owner concerning institutional controls for the site.

D. Key Issues

None identified at this time.

V. COST INFORMATION

VI. WASTE DISPOSITION

To date, approximately 2,600 cubic yards of asbestos-contaminated material (ore, stoner rock, exfoliated vermiculite, clinkers, contaminated dirt, etc.) have been excavated and removed from the substation and taken to a regulated disposal site approximately 60 miles west of Salt Lake City.